WHAT IS CLAIMED IS:

1. An impedance matching circuit for a multi-band radio frequency device, said impedance matching circuit comprising:

an input circuit for receiving a multi-band radio frequency signal;

a frequency selective network comprising a first frequency selective sub-network that is configured to selectively output a first radio frequency signal comprised in a first sub-band of said multi-band radio frequency signal, and a second frequency selective sub-network that is configured to selectively output a second radio frequency signal comprised in a second sub-band of said multi-band radio frequency signal, said first and second frequency selective sub-networks being switch-less networks.

2. An impedance matching network as claimed in Claim 1, wherein said first frequency selective sub-network comprises a common reactive element of a first type, and a first reactive element of a second type, and said second frequency selective sub-network comprises said common reactive element, and a second reactive element of said second type, said first and second reactive elements being arranged in series, said first radio frequency signal being outputted at a first node of said series arrangement and said second radio frequency signal being outputted at a second node of said series arrangement.

3. An impedance matching network as claimed in Claim 2, wherein said common reactive element is an inductor and

said first and second reactive elements are capacitors.

4. An impedance matching network as claimed in Claim 1, wherein said first frequency selective sub-network comprises a series arrangement of common reactive elements of a first type, and a first reactive element of a second type, and said second frequency selective sub-network comprises said series arrangement of common reactive elements, and a second reactive element of said second type, said first reactive element being coupled between a first node of said series arrangement and a first output node for outputting said first radio frequency signal, and said second reactive element being coupled between a second node of said series arrangement and a second output node for outputting said second radio frequency signal.

5. An impedance matching network as claimed in Claim 4, wherein said frequency selective network comprises a third frequency selective sub-network that is configured to selectively output a third radio frequency signal comprised in a third sub-band of said multi-band radio frequency signal.

6. An impedance matching network as claimed in Claim 1, wherein the input circuit is an adder circuit.

7. An impedance matching network as claimed in Claim 6, wherein the adder circuit is comprised of connected nodes for receiving signals from first and second mixer circuits.

8. An impedance matching network as claimed in Claim 1, wherein the input circuit is comprised of at least one

input terminal for receiving said multi-band radio frequency signal.

9. An impedance matching network as claimed in Claim 8, wherein said multi-band radio frequency signal is received from a pre-amplifier stage commonly used for multi-band signal amplification, and said first and second radio frequency signals are signals for input to a first non-sub-band-shared amplifier stage configured to amplify said first radio frequency signal, and a second non-sub-band-shared amplifier stage configured to amplify said second radio frequency signal, respectively.

10. A multi-band radio frequency device with an impedance matching circuit, said impedance matching network comprising:

an input circuit for receiving a multi-band radio frequency signal;

a frequency selective network comprising a first frequency selective sub-network that is configured to selectively output a first radio frequency signal comprised in a first sub-band of said multi-band radio frequency signal, and a second frequency selective sub-network that is configured to selectively output a second radio frequency signal comprised in a second sub-band of said multi-band radio frequency signal, said first and second frequency selective sub-networks being switch-less networks.

11. A multi-band radio frequency device as claimed in Claim 10, wherein said first frequency selective sub-network comprises a common reactive element of a first

type, and a first reactive element of a second type, and said second frequency selective sub-network comprises said common reactive element, and a second reactive element of said second type, said first and second reactive elements being arranged in series, said first radio frequency signal being outputted at a first node of said series arrangement and said second radio frequency signal being outputted at a second node of said series arrangement.

12. A multi-band radio frequency device as claimed in Claim 10, wherein said first frequency selective sub-network comprises a series arrangement of common reactive elements of a first type, and a first reactive element of a second type, and said second frequency selective sub-network comprises said series arrangement of common reactive elements, and a second reactive element of said second type, said first reactive element being coupled between a first node of said series arrangement and a first output node for outputting said first radio frequency signal, and said second reactive element being coupled between a second node of said series arrangement and a second output node for outputting said second radio frequency signal.

13. A multi-band radio frequency device as claimed in Claim 10, further comprising first and second mixer circuits, the input circuit comprising connected nodes for receiving signals from first and second mixer circuits.

14. A multi-band radio frequency device as claimed in Claim 13, further comprising a first amplifier circuit for amplifying said first radio frequency signal, and a second

amplifier circuit for amplifying said second radio frequency signal.

15. A multi-band radio frequency device as claimed in Claim 14, wherein said impedance matching circuit, said first and second mixers, and said first and second amplifier circuits are comprised in a transmit branch of said multi-band radio frequency device.

16. A multi-band radio frequency device as claimed in Claim 10, further comprising a pre-amplifier stage commonly used for multi-band signal amplification, a first non-sub-band-shared amplifier stage, and a second non-sub-band-shared amplifier stage, wherein said input circuit comprises at least one input terminal for receiving said multi-band radio frequency signal, said first radio frequency signal being inputted to said first non-sub-band-shared amplifier stage, and said second radio frequency signal being inputted to said second non-sub-band-shared amplifier stage.

17. A multi-band radio frequency device as claimed in Claim 16, wherein said second non-sub-band-shared amplifier stage is switched off when said first non-sub-band-shared amplifier stage is switched on, and said first non-sub-band-shared amplifier stage is switched on when said first non-sub-band-shared amplifier stage is switched off.

18. A multi-band radio frequency device as claimed in Claim 16, wherein said impedance matching circuit, said pre-amplifier stage, and said first and second non-sub-band-shared amplifier stages are comprised in a transmit

branch of said multi-band radio frequency device.

19. An impedance matching method for a multi-band radio frequency device, said impedance matching method comprising:

selectively outputting a first radio frequency signal comprised in a first sub-band of a multi-band radio frequency signal;

selectively outputting a second radio frequency signal comprised in a second sub-band of said multi-band radio frequency signal, said first and second selectively outputting being done without applying switching in a signal path.

20. An impedance matching method as claimed in Claim 19, further comprising selectively outputting a third radio frequency signal comprised in a third sub-band of a multi-band radio frequency signal, said third selectively outputting being done without applying switching in the signal path.